

The Jewel of India

Urological hospital leads country with care and compassion

In the mid-1970s, people living in the Indian farming state of Gujarat had few options when it came to urologic care. It was an especially dire situation for patients with renal disease. Neither dialysis nor transplant was available.

Around 1975, a young Indian urologist named Mahesh R Desai, MS, returned to his hometown of Ahmedabad

fresh from specialty training at the Royal College of Surgeons in London and Edinburgh. Soon Dr Desai recognized the importance of institutionalized treatment of kidney diseases throughout Gujarat.

With a little help from a friend and fellow urologist—and some willing financial donors—Dr Desai established the Muljibhai

Patel Urological Hospital (MPUH) in the rural town of Nadiad. What started in 1978 as a small, 25-bed hospital has now grown into a 170-bed specialty centre and teaching institution. It is the first hospital in India devoted exclusively to nephrology and urology. Although MPUH has far surpassed its humble beginnings, its mission remains the same: to provide the most modern treatment for the common man. Every patient is treated, regardless of his or her ability to pay.

'UroScan' recently talked with Dr Desai about the hospital's evolution, its current services, and the unique source of pride it represents, not only for India, but also for the urological community worldwide.

WHAT MADE YOU RETURN TO INDIA?

After I did my training in England and Scotland, I wanted to come back to Ahmedabad and start up a private practice. It's where I was born, and my parents lived there. Unfortunately, before I finished my specialty training, my mother died. It was her wish that I serve the community. I was the first

JOURNAL WATCH

IMPORTANT PAPERS YOU MAY HAVE MISSED



• **Cnattingius S, Lundberg F, Sandin S, Gronberg H, Iliadou A. Birth characteristics and risk of prostate cancer: the contribution of genetic factors.** *Cancer Epidemiol Biomarkers Prev.* 2009;18(9):OF1-5.



• **Broomfield RJ, Morgan SD, Khan A, Stickler DJ. Crystalline bacterial biofilm formation on urinary catheters by urease-producing urinary tract pathogens: a simple method of control.** *J Med Microbiol.* 2009;58:1367-1375.



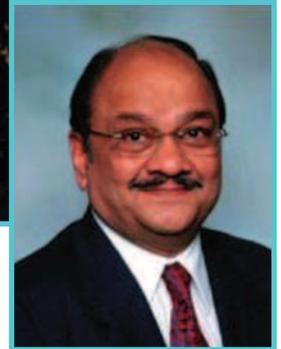
• **Claessens Y-E, Schmidt J, Batard E, et al. Can C-reactive protein, procalcitonin and mid-regional pro-atrial natriuretic peptide measurements guide choice of in-patient or out-patient care in acute pyelonephritis? Biomarkers In Sepsis (BIS) multicentre study.** *Clin Microbiol Inf.* 2009;9. doi: 10.1111/1469-0691.



• **Miralles-Guri C, Bruni L, Cubilla A, Castellsague X, Bosch FX, De Sanjose S. HPV prevalence and type distribution in penile carcinoma.** *J Clin Pathol.* 2009;8. doi:10.1136/2008.063149.



The Muljibhai Patel Urological Hospital in Nadiad, India, treats every patient who needs care, regardless of his or her ability to pay.



Dr Mahesh R Desai

▶ doctor in the family; my other siblings became engineers.

THERE WAS ANOTHER DR DESAI INSTRUMENTAL IN STARTING UP MPUH; WHO WAS HE?

Dr Virendra V Desai was a friend and senior colleague of mine who worked with me at the same hospital in London. He had returned to the area [Gujarat] before me and really was the one who started realizing the need for institutionalized care of renal disease. After I returned home, he talked to me about his

WHEN IT OPENED, WHAT DID THE HOSPITAL FOCUS ON FIRST?

Initially, we performed a lot of kidney stone surgeries, which required an open procedure. Gujarat is situated in a major stone belt that extends from India into Pakistan. It is a very hot region where temperatures can reach 45 to 48 degrees Celsius in the summer. Dehydration is the most common cause of stone formation here, where we see mostly calcium oxalate stones. Since we opened, we have done close to 12 000

free. Even bilateral stones can be treated in one procedure with most patients discharged within three days. More than 90% of our patients have total clearance of their stones.

WHAT ABOUT KIDNEY TRANSPLANTS?

We did our first one in 1980, which was also the first in the state of Gujarat. Since then, we have performed 1800 kidney transplants, with excellent results. In 1999, we did our first laparoscopic donor nephrectomy, which was also the first one done in India. We have now done more than 600 of these procedures. Today, we are India's number-one live-kidney transplant hospital. Our longest surviving kidney transplant patient was transplanted 27 years ago. At one year, our graft survival rate is 88%. By five years, it is 70%, which is comparable to international standards. We average around eight transplants every month.

DO YOU HAVE A DIALYSIS UNIT?

Yes, we do. Twenty hemodialysis machines operate in four shifts each day to treat 1500 patients each month. There is a separate facility for dialyzing patients with hepatitis B and hepatitis C, to

avoid cross-infection. Options include carbonate dialysis, hemofiltration and plasmapheresis. We have treated more than 5,000 cases of renal failure with peritoneal dialysis. We have also started continuous ambulatory peritoneal dialysis as a long-term alternative to renal transplantation in patients with chronic renal failure.

CAN YOU DESCRIBE THE CLINICAL PHARMACOLOGY UNIT YOU STARTED RECENTLY?

On Jan. 22, 2008, we opened India's first clinical pharmacology unit for patients with renal impairment. It is operated by Veeda, a clinical research organization. The seven-bed unit is designed to conduct Phase I and Phase II clinical studies on newly discovered drugs. Plans are also underway to do clinical trials in patients with prostate and bladder cancers.

CAN YOU TELL US ABOUT THE PROSTATE CANCER SCREENING CAMPS YOU SET UP?

I got interested in prostate cancer back in 1985. India started using the prostate-specific antigen test as a

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idea for a hospital in Nadiad. He was also instrumental in finding donors who were willing to give us money. We opened on March 20, 1978. Shri N Sanjiva Reddy, president of India at the time, inaugurated the hospital. Sadly, at the very young age of 44, Dr Virendra Desai had a heart attack ... and died in 1981. MPUH was really his vision from the start.

stone cases. More than 6000 of these have been performed using percutaneous nephrolithotripsy, giving us probably the largest series in the world.

Other treatments for kidney stones include extra corporeal short-wave lithotripsy and ureterorenoscopy. We have modified our stone management so that patients only require a short, single admission to become stone

screening tool in 1989, which was started at our institute. Before screening, most of the prostate cancers we saw (80%) were already advanced, so there wasn't much you could do about them.

We take prostate cancer screening out into the community by setting up camps in small villages, say with 6000 or so people. A team of doctors, nurses and technicians sets up shop at the beginning of the week, complete with two ultrasound machines. Every man 45 years of age and older is screened for prostate cancer. By Saturday, all the reports are completed, indicating which individuals need to be called back on Sunday for a rectal ultrasound scan. If anyone is in need of a biopsy, arrangements are made right then for them to come to the hospital free of charge.

Earlier this year, we became the first hospital in India to install an Ablatherm high-intensity, focused ultrasound machine. Right now, we are looking at purchasing a da Vinci system to perform robot-assisted radical prostatectomy. Currently, we perform transurethral resection of the prostate and transurethral needle ablation of the prostate. Less than 1% of our prostate surgeries are open procedures.

THE HOSPITAL TAKES GREAT PRIDE IN ITS NONPROFIT STATUS AND CHARITABLE MISSION. CAN YOU EXPLAIN MORE ABOUT THAT?

In 1981, we received approval from the Indian Council of Medical Research in Delhi exempting from income tax any donations made to our institution. Donors now qualify for a 125% exemption off of their income taxes. Any surplus we make is put right back into the hospital. At least 20%

of our services are provided free of charge to patients. Another 40% is subsidized; the remaining 40% is paid for by private patients. Most of our capital expenses are met through donations, while our day-to-day expenses are met through these fees for services. No patient is ever turned away for inability to pay.

WHAT KINDS OF EDUCATIONAL PROGRAMS DOES THE HOSPITAL OFFER?

Since 1993, the hospital has been recognized as a teaching institute for postgraduate studies by the National Board of Examination in Delhi.

We offer four positions in urology (and one position for a research fellow), three in nephrology and one in anesthesia each year. We have trained more than 60 doctors in urology and 30 in nephrology. Our clinical endourology fellowship program is recognized by the Endourological Society.

The hospital also provides a host of educational programs through its Jayaramdas Patel Academic Centre, which was established in January 2007. Its purpose is to bridge the gap between the present expected standard of endourology and laparoscopic surgery and the inconsistent training conducted in the Indian subcontinent. The centre conducts a number of workshops, seminars, conferences and surgical trainings. In 2008, it hosted an international meeting on laparoscopic single-port surgery in urology. Recent course topics have included benign prostatic hypertrophy, nephrology, advanced urology imaging, andrology, retrograde intra-renal surgery and uro-oncology.

WHAT ARE SOME OF YOUR GOALS FOR THE FUTURE?

Right now, we are affiliated with one medical college. Plans are underway to get us established with a second institution. Since 1997, our department of nephrology has been a 'sister renal center' to the department of nephrology at the University of Arkansas for Medical Sciences. Eventually, I would like to see an actual medical school established here.

On a personal level, my son,

Mihir M Desai, MD, is currently at the University of Southern California Institute of Urology as a professor of clinical urology and head of the robotic and laparoscopy section. He visits our hospital at least three or four times a year, participates in teaching and training and assists in transfer of newer technology. I'd like him to come back and work here. I think we'd make a great team. Let's hope he reads this!

Clinical Trial 1

TITLE:

STUDY OF BLOOD AND TUMOR SAMPLES FROM MEN WITH AN INHERITED RISK OF PROSTATE CANCER

PROTOCOL ID:

NCT00959023

SUMMARY:

Called the UK Genetic Prostate Cancer Study, this clinical trial is studying blood and tumor samples from men with an inherited risk of prostate cancer. The findings may help doctors learn more about changes that occur in DNA and identify genes related to cancer. Among its many objectives, the study aims to find genes that predispose people to prostate cancer; determine if such genes are associated with disease and treatment parameters; determine if these genes are associated with environmental factors; estimate the percentage of prostate cancer patients who have a positive family history of the disease; estimate the relative risk of developing prostate cancer in a currently unaffected member of a prostate cancer family; and ascertain whether relatives of prostate cancer patients are at increased risk of developing cancers other than prostate cancer.

ELIGIBILITY:

Patients must be male with a diagnosis of prostate cancer. They may be any age at the time of diagnosis if they are attending prostate clinics at The Royal Marsden NHS Foundation Trust. Those not attending prostate clinics at the trust must meet one of the following criteria: no older than 60 years at diagnosis; diagnosis in two relatives where one is ≤ 65 years at diagnosis; or at any age in a cluster with three or more cases. Any unaffected male relatives of men who already are taking part in the study can participate.

LOCATIONS AND CONTACT:

135 study locations throughout the UK. Sponsored by the Institute of Cancer Research. Rosalind Eeles, PhD, principal investigator, Royal Marsden, Surrey, 44-20-8642-6011.

In this issue...

Urological Oncology

MORE CASES MEAN BETTER OUTCOMES FOR PROSTATECTOMY P1442

Case volume is a significant predictor of immediate surgical outcomes for patients undergoing radical prostatectomy (RP). A prospective cohort study of 48 000 patients by Mitchell et al shows that **hospitals with the highest case volumes have reduced rates for length of stay (LOS), intensive care unit (ICU) admission and complications (CR).**

Data from 130 hospital centres were obtained from the University HealthSystem Consortium's Clinical Data Base, a repository of information from academic medical centres in the USA. Patients who underwent RP were identified and outcome variables examined. Case volumes were placed into three tiers, from lowest to highest.

Centres with the highest case volumes had a mean LOS of 2.09 days, compared with 3.77 for centres with the lowest volumes. **ICU rates for the three tiers from highest to lowest were 1.30, 3.61 and 18.57. Complicate rates were 5.76, 8.79 and 15.93, respectively.** Additional analysis found a 'ceiling effect' for ICU rates and CRs. These were significantly different only between the first and second tiers. No differences in outcome were found among five geographical regions studied.

Sexual Medicine

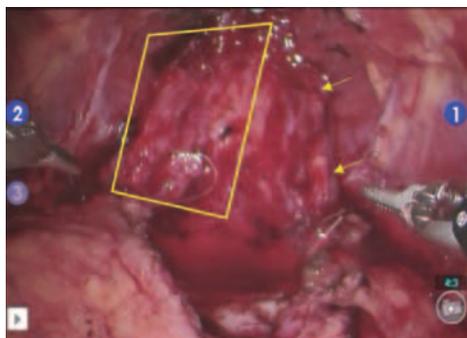
IS THERE ANY ADVANTAGE TO DOUBLING NERVE TISSUE? P1484

Preserving the neurovascular bundle (NVB) remains one of the most important aspects of radical prostatectomy. Previous

studies have shown better potency results with bilateral nerve-sparing (BNS) surgery compared to unilateral nerve-sparing (UNS) procedures. However, potency rates improved only in the range of 3% to 23% when the volume of nerve tissue was doubled.

In their article, Finley et al analyze the return of potency after unilateral wide excision of one NVB versus preserving both NVBs during robotic-assisted radical prostatectomy. Two groups of men were treated: 42 with cautery and 62 with a cautery-free technique. Patients were given self-administered questionnaires to determine the extent and level of satisfaction with their erections.

Doubling the nerve volume increased potency by 1.36 times in the cautery group. Similar results were observed for the cautery-free group, where potency increased by 1.15 times. **There were no differences between UNS and BNS for either group at 24 months when it came to patient-reported International Index of Erectile Function-5 scores. Such findings suggest that a neural crossover may occur with the remaining NVB.**



Arrows show the preserved neurovascular bundle.

Laparoscopic and Robotic Urology

OLDER MEN DO WELL WITH ROBOTIC PROSTATECTOMY P1492

How old is too old for robot-assisted radical prostatectomy (RARP)? Although radical prostatectomy (RP) is recommended for patients with 10 or more years of life expectancy, even older men are now able to live that length of time and more. In their study, Greco et al find that **men age 70 and older undergoing RARP have comparable outcomes to younger men.** The authors' conclusion: advanced chronological age should not be a contraindication for RARP in patients with clinically localized prostate cancer.

A series of 203 men of various ages underwent RARP by one surgeon. The 203 men, aged 70 years or older, all had similar baseline characteristics as the younger men. Median follow-up was 59.6 weeks.

Compared with the younger men, the older men had significantly greater pathological RP Gleason grades. However, surgical complications were found to be not significantly different between the age groups. **After six months, continence rates were significantly lower in the older men. By 12 months, however, these rates returned to the same equivalent levels in the younger men.** Returning to driving took longer for the older men (3.4 weeks) than it did for the younger group (2.2 weeks). **There were no significant differences between the groups with regard to hospital admissions, surgery-related problems and American Urological Association symptom scores.**